

U.S. Department of Education
2012 National Blue Ribbon Schools Program
A Public School - 12NJ10

School Type (Public Schools): ☐ Charter ☐ Title 1 ☒ Magnet ☒ Choice
(Check all that apply, if any)

Name of Principal: Mr. David Tankard

Official School Name: Bergen County Technical High School - Teterboro

School Mailing Address: 504 Route 46 West
Teterboro, NJ 07608-1128

County: Bergen State School Code Number*: 03-0290-070

Telephone: (201) 343-6000 E-mail: davtan@bergen.org

Fax: (201) 288-6028 Web site/URL: www.bergen.org

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge all information is accurate.

(Principal's Signature) Date _____

Name of Superintendent*: Dr. Howard Lerner Superintendent e-mail: howler@bergen.org

District Name: Bergen County Vocational Technical Schools District Phone: (201) 343-6000

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

(Superintendent's Signature) Date _____

Name of School Board President/Chairperson: Mr. William Connelly

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I - Eligibility Certification), and certify that to the best of my knowledge it is accurate.

(School Board President's/Chairperson's Signature) Date _____

**Non-Public Schools: If the information requested is not applicable, write N/A in the space.*

The original signed cover sheet only should be converted to a PDF file and emailed to Aba Kumi, Blue Ribbon Schools Project Manager (aba.kumi@ed.gov) or mailed by expedited mail or a courier mail service (such as Express Mail, FedEx or UPS) to Aba Kumi, Director, Blue Ribbon Schools Program, Office of Communications and Outreach, U.S. Department of Education, 400 Maryland Ave., SW, Room 5E103, Washington, DC 20202-8173.

PART I - ELIGIBILITY CERTIFICATION

12NJ10

The signatures on the first page of this application certify that each of the statements below concerning the school's eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even K-12 schools, must apply as an entire school.)
2. The school has made adequate yearly progress each year for the past two years and has not been identified by the state as "persistently dangerous" within the last two years.
3. To meet final eligibility, the school must meet the state's Adequate Yearly Progress (AYP) requirement in the 2011-2012 school year. AYP must be certified by the state and all appeals resolved at least two weeks before the awards ceremony for the school to receive the award.
4. If the school includes grades 7 or higher, the school must have foreign language as a part of its curriculum and a significant number of students in grades 7 and higher must take foreign language courses.
5. The school has been in existence for five full years, that is, from at least September 2006.
6. The nominated school has not received the Blue Ribbon Schools award in the past five years: 2007, 2008, 2009, 2010 or 2011.
7. The nominated school or district is not refusing OCR access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
8. OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
9. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
10. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

PART II - DEMOGRAPHIC DATA

12NJ10

All data are the most recent year available.

DISTRICT

1. Number of schools in the district 0 Elementary schools (includes K-8)
(per district designation): 0 Middle/Junior high schools
4 High schools
0 K-12 schools
4 Total schools in district
2. District per-pupil expenditure: 26788

SCHOOL (To be completed by all schools)

3. Category that best describes the area where the school is located: Suburban
4. Number of years the principal has been in her/his position at this school: 1
5. Number of students as of October 1, 2011 enrolled at each grade level or its equivalent in applying school:

Grade	# of Males	# of Females	Grade Total			# of Males	# of Females	Grade Total
PreK	0	0	0		6	0	0	0
K	0	0	0		7	0	0	0
1	0	0	0		8	0	0	0
2	0	0	0		9	79	95	174
3	0	0	0		10	63	89	152
4	0	0	0		11	74	82	156
5	0	0	0		12	83	90	173
Total in Applying School:								655

6. Racial/ethnic composition of the school: 0 % American Indian or Alaska Native
29 % Asian
5 % Black or African American
17 % Hispanic or Latino
1 % Native Hawaiian or Other Pacific Islander
48 % White
0 % Two or more races
100 % Total

Only the seven standard categories should be used in reporting the racial/ethnic composition of your school. The final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic data to the U.S. Department of Education published in the October 19, 2007 *Federal Register* provides definitions for each of the seven categories.

7. Student turnover, or mobility rate, during the 2010-2011 school year: 1%

This rate is calculated using the grid below. The answer to (6) is the mobility rate.

(1)	Number of students who transferred to the school after October 1, 2010 until the end of the school year.	0
(2)	Number of students who transferred from the school after October 1, 2010 until the end of the school year.	4
(3)	Total of all transferred students [sum of rows (1) and (2)].	4
(4)	Total number of students in the school as of October 1, 2010	647
(5)	Total transferred students in row (3) divided by total students in row (4).	0.01
(6)	Amount in row (5) multiplied by 100.	1

8. Percent of English Language Learners in the school: 0%

Total number of ELL students in the school: 0

Number of non-English languages represented: 0

Specify non-English languages:

9. Percent of students eligible for free/reduced-priced meals: 10%

Total number of students who qualify: 65

If this method does not produce an accurate estimate of the percentage of students from low-income families, or the school does not participate in the free and reduced-priced school meals program, supply an accurate estimate and explain how the school calculated this estimate.

10. Percent of students receiving special education services: 6%

Total number of students served: 41

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional categories.

<u>1</u> Autism	<u>0</u> Orthopedic Impairment
<u>0</u> Deafness	<u>12</u> Other Health Impaired
<u>0</u> Deaf-Blindness	<u>18</u> Specific Learning Disability
<u>0</u> Emotional Disturbance	<u>3</u> Speech or Language Impairment
<u>0</u> Hearing Impairment	<u>1</u> Traumatic Brain Injury
<u>0</u> Mental Retardation	<u>0</u> Visual Impairment Including Blindness
<u>6</u> Multiple Disabilities	<u>0</u> Developmentally Delayed

11. Indicate number of full-time and part-time staff members in each of the categories below:

	Number of Staff	
	<u>Full-Time</u>	<u>Part-Time</u>
Administrator(s)	<u>2</u>	<u>0</u>
Classroom teachers	<u>55</u>	<u>0</u>
Resource teachers/specialists (e.g., reading specialist, media specialist, art/music, PE teachers, etc.)	<u>17</u>	<u>3</u>
Paraprofessionals	<u>0</u>	<u>0</u>
Support staff (e.g., school secretaries, custodians, cafeteria aides, etc.)	<u>21</u>	<u>0</u>
Total number	<u>95</u>	<u>3</u>

12. Average school student-classroom teacher ratio, that is, the number of students in the school divided by the Full Time Equivalent of classroom teachers, e.g., 22:1: 12:1

13. Show daily student attendance rates. Only high schools need to supply yearly graduation rates.

	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Daily student attendance	96%	96%	96%	96%	95%
High school graduation rate	100%	100%	100%	100%	100%

14. **For schools ending in grade 12 (high schools):**

Show what the students who graduated in Spring 2011 are doing as of Fall 2011.

Graduating class size:	<u>156</u>
Enrolled in a 4-year college or university	<u>74%</u>
Enrolled in a community college	<u>6%</u>
Enrolled in vocational training	<u>0%</u>
Found employment	<u>7%</u>
Military service	<u>1%</u>
Other	<u>12%</u>
Total	<u>100%</u>

15. Indicate whether your school has previously received a National Blue Ribbon Schools award:

☒ No

☐ Yes

If yes, what was the year of the award?

PART III - SUMMARY

12NJ10

As a district, the Bergen County Technical Schools began its evolution long before the mandates of No Child Left Behind. Terms such as excellence, equity, achievement, and accountability have almost always been part of our vernacular. While our district has long been associated with the Bergen County Academies, a diamond in the rough has emerged in a town of 67 residents. For some, it may seem hard to imagine a Blue Ribbon on a highway, amidst factories, an airport, and a recently completed juvenile correctional facility. However, BCTHS has shown otherwise.

In order to fully appreciate the school's accomplishments today, it is important to understand the history of BCTHS. Previously operating as the Bergen County Vocational Schools – Teterboro and the Bergen County Vocational School – Teterboro – Special Needs, the building operated as two separate and distinct programs. As described in the 2000-2001 Middle States report, “The student population in the past has typically included those students whose strengths and/or educational priorities have not been in the area of academics. Rather, students came to the school seeking preparation for trades in numerous vocational areas, including plumbing, masonry, landscaping, landscape design, cosmetology, electrical technology, electronics, truck/diesel repair, auto body, welding and skin care.”

Approaching the 10th anniversary of its first graduating class, Bergen County Technical High School - Teterboro has emerged as one of the premier schools both at the state and federal level as evident by the ranking of #94 in Newsweek's “America's Best High Schools 2011.” Offering 9 full-time technical majors (Pre-Engineering, Law & Justice, Culinary®, Automotive Engineering and Design, Fashion Art, Design, & Merchandising, Strategic Asset Management, Computer Science, Commercial Art & Graphic Design, & Digital Media Arts), students follow a coherent scope and sequence of courses, many of which are Advanced Placement or articulated with a post-secondary institution.

BCTHS draws from over 48 towns throughout Bergen County, NJ. Resulting from their commitment to attend BCTHS, the Class of 2012 earned \$19 million dollars in college scholarship money. Far more valuable than monetary gain, BCTHS's greatest asset is our diverse student body. Although Bergen County is 72% Caucasian, the student population of Teterboro is only 48% Caucasian. In addition, unlike the traditional technical school, females account for 54% of the student population.

The Bergen County Technical High School, Teterboro is committed to “Revolutionizing the Balance Between Tradition, Innovation & Change”. Our school's mission is as follows: Bergen County Technical High School, Teterboro has created a vigorous learning community of students, educators, and parents that serves as a model for the cooperation required for humanity to develop workable solutions to global problems. The school inspires and challenges students to understand complex issues through the study of technical arts and sciences, engineering and design, fabrication, communication, and technology. Students are encouraged to work together in a setting that promotes shared decision-making, discovery, and accomplishment. Its programs are designed to meet 21st century demands for qualified, adept, and ethical knowledge workers committed to community service as “young adults for others.”

In order to thrive in the 21st century, our school recognizes the need to prepare students with rigorous curricula. To that end, the majority of academic course work is at the Honors or Advanced Placement Level. More specifically, twenty-one Honors level academic courses are available to our students. In addition, among our seventeen Advanced Placement offerings are:

Art, Calculus B and C, Statistics, Spanish Language, Spanish Literature, Chemistry Physics B and C, Biology, Computer Science, U.S. History, Environmental Science, US Government, English Language, English Literature, Microeconomics, Macroeconomics, and Music Theory.

In 2010-2011, 553 AP exams were taken in a school of 655 students. Of 553 AP exams administered, 69% (383) of the students scored a 3 or higher.

Articulations with Colleges, Universities and Post-Secondary Institutions

Over 100 post-secondary credits are available through articulations with several colleges and post-secondary institutions including, but not limited to: Rutgers University, Syracuse University, Bergen Community College, RIT, & NJIT.

Fine Arts

Teterboro is committed to the education of the whole child. In addition to academic and technical excellence, the campus is proud to offer Fine Arts courses such as: 2 D Design, Portfolio Prep, Painting, Piano/Keyboard, Beginning Guitar, Basic Musicianship, AP Music Theory, Chorus, Band, and AP Art.

Extracurricular Offerings

All students are encouraged to join in one of our 15 sports offerings. Athletics are viewed as an important component of the high school experience, and fosters the development of the mind and body—promoting the scholar-athlete. In addition to development of students on the athletic field, Teterboro offers a number of diverse activities such as Campus Newspaper, Ski/Snowboard Club, Student Government, Yearbook, Heroes & Cool Kids, National Honor Society, Peer Leaders, Physics Club, and Skills USA.

1. Assessment Results:

The High School Proficiency Assessment is used to determine student achievement in reading, writing, and mathematics as specified in the New Jersey Core Curriculum Content Standards. More importantly, a BCTHS is required to be proficient (200-249) on the HSPA in Language Arts Literacy and Mathematics in order to be eligible for graduation. First administered in the eleventh grade, students who fail the HSPA have an opportunity to retest in October and March of their senior year; an option that is rarely needed for our students.

Under NCLB, every school has been evaluated annually to see if it has made adequate yearly progress (AYP) toward meeting the state benchmarks. Since the start of AYP calculations in 2002, BCTHS has reached this goal; a stretch of ten consecutive years. Terms such as, Early Warning, school in need of improvement, corrective action, school restructuring, and implementation of restructuring plan, have never been part of our vernacular.

Examination of BCTHS scores over the last five years on the High School Proficiency Assessment (HSPA) in Language Arts Literacy and Mathematics lead to a clear picture; our school has consistently outperformed both state and federal benchmarks. More importantly, an achievement gap has never existed on our campus. Although 2011 AYP benchmarks were approximately 90% in language arts and 80% in math, all BCTHS students (economically disadvantaged, African-American, Hispanic, Special Education, Asian) achieved 100%.

Scores in language arts and mathematics show significant gains over the five-year period from 2006-2007 to 2010-2011: with the number of students the same in comparison years - a 34% increase in advanced proficiency in language arts for socio-economically disadvantaged students; with the number of students the same in comparison years – a 14% increase in advanced proficiency in language arts and a 29% increase in advanced proficiency in mathematics for African-American students; with the number of students increasing in comparison years – a 25% increase in advanced proficiency in language arts and a 10% increase in advanced proficiency in mathematics for Hispanic or Latino students.

Although there are many other examples, a sample comparison of HSPA scores in NJ versus BCTHS in 2011 show the following: 8% of economically disadvantaged students in NJ versus 43% of economically disadvantaged students at BCTHS were advanced proficient in mathematics; 49% of African-American students in NJ versus 100% of African-American students at BCTHS were proficient or advanced proficient in mathematics.

The school's Advanced Placement participation has increased by almost 200% in the last five years, and 69% of students in 2011 earned a passing score (3, 4, or 5). From 2007-2011, the school's AP participation rate jumped from 28% to 53%, while the number of tests taken jumped from 297 to 553 during the same period. Of the 655 students attending the school in 2011, 50% took an AP course and exam; a stark increase from the 18% average across NJ. Examining AP participation by grade levels in 2011, 70% of all seniors, 77% of all juniors, and 51% of all sophomores took an AP exam. In addition, although non-white students account for 52% of the total population, they accounted for 64% of the exams. Mean scores in 2011 on AP exams were as follows: 3.06 for males, 3.15 for low income students, and 3.26 for females.

Overall in 2011, BCTHS students mean scores were higher than their global counterparts in Biology, Calculus AB, Calculus BC, English Literature & Language, Physics B, US Government, and US History.

Similar to growth made on the HSPA, students at BCTHS have also increased their scores on the SAT over the last five years. On the Math SAT, students showed an average overall growth of 52 points; average score of 583 in 2008 versus 635 in 2011. On the Verbal portion of the SAT, students showed an average overall growth of 31 points; average score of 554 in 2008 versus 585 in 2011. On the Writing portion of the SAT, students showed an average overall growth of 51 points; average score of 551 in 2008 versus 602 in 2011.

2. Using Assessment Results:

As a receiving school of over forty-eight districts throughout the county, the school recognizes that grades on a transcript are not always indicative of a student's knowledge. Upon acceptance to BCTHS, incoming eighth graders take assessments in Spanish, English, and Mathematics. In order to place students on a path towards academic success, it is essential to analyze student performance on the initial assessments.

Using classroom assessment to improve student learning is not a new idea. More than 30 years ago, Benjamin Bloom showed how to conduct this process in practical and highly effective ways when he described the practice of mastery learning (Bloom, 1968, 1971). However, NCLB mandates have eroded assessment in many schools into nothing more than measuring "accountability". Unlike many others in education, the faculty of BCTHS embrace the idea that their effectiveness is not narrowly defined on the basis of what they do as teachers, but also on what their students are able to do.

One of the main reasons that BCTHS has shown such growth is that faculty understands the role of assessment as a means to improve instruction. Our teachers use common assessments throughout each course, align assessments to New Jersey Core Curriculum Content/Advanced Placement/Technical standards, analyze scores on student assessments, and reflect on their teaching pedagogy. Through the NJDOE's web portal, the administration uses NJ Standards Measurement and Resource for Teaching (NJ SMART), a comprehensive data warehouse, student level data reporting, and unique statewide student identification system. Analysis of this data allows for the identification of strengths and weaknesses in the school; resulting in strategic interventions for the upcoming year.

As a technical school, BCTHS is eligible to receive federal funding from Perkins Grants. In the era of accountability, funding is directly related to results in the classroom. The most important indicator of success in a technical program is student performance on performance and written end of program tests. Although technical teachers assess throughout all for years of instruction, the stakes are much higher for seniors.

In preparation for their end of program test, technical teachers administer a pre-assessment to seniors in January. Pre-assessment scores reports are interpreted by students, academic and technical department members, administration and curriculum advisors to identify deficiencies and set instructional goals to improve instruction prior to the final end of program test in May. Once written and performance end of program tests are completed in May, data analysis drives planning for the upcoming year. Depending upon the test results, a variety of action plans may be formed. Plans may call for revision of scope and sequence, outside professional development from industry, revision of advisory boards or other courses of action.

Aside from technical assessments, BCTHS is motivated to see students succeed on their AP tests. On a national level, 37.6% of students entering college need remediation once they get there. This statistic is one of the main reasons that BCTHS promotes AP courses for all of our students. All research with AP courses points to positives with preparing students to succeed in college. In his *The Three Myths of High School Reform*: Secretary Arne Duncan's Remarks at the College Board AP Conference, Secretary Duncan stated: "The AP program shows that great teaching, rigor and strong, engaging curriculum matter a great deal—even for students with similar abilities. AP students are 50 percent more likely to graduate from college in four years than a control group of students with the same SAT score and socioeconomic

background. Why does taking AP classes alone make such a difference? Because as all of you know AP courses develop the study skills, critical reasoning, and habits of mind that prepare students for the transition to college. AP classes also give students, particularly first-generation college goers, the confidence that they can successfully handle college-level work.”

As such, BCTHS takes preparation for AP exams very seriously. Employing a process of pre-testing in AP, students, staff, and administration can then identify deficiencies to be remediated. In addition, all of the exams administered in AP classes are modeled after the particular AP exam. These efforts provide students an opportunity to better prepare themselves for actual testing with a fervent determination to improve their individual performance. Once AP exams have been scored, AP Instructional Planning Reports are made available from the College Board. After careful analysis of the report, teachers identify strengths/weaknesses in their curriculum and instruction, and make necessary alterations. In addition, each June at least one of our AP teachers is invited to evaluate and score the free-response sections of the AP Exams as an AP reader. This communal activity allows teachers to refine their pedagogical skills and share best practices.

One of the hallmarks or a best practice of effective schools is to be transparent organizations. Therefore, open communication about student progress is a vital. Through the use of PowerSchool, BCTHS provides students and parents real-time web access to their child's grades. Most importantly, it allows parents to actively participate in the child's education. In addition, individual student progress is reported to parents in progress reports, report cards, and individual guidance meetings.

As in previous years, BCTHS is proud to share our success with the larger community. In 2011, BCTHS was named #94 in Newsweek's list of the top high schools in America. (<http://www.thedailybeast.com/newsweek/features/2011/americas-best-high-schools.html>) In order to be eligible, schools are required to submit the following assessment related data: AP/IB/AICE tests per graduate, average SAT and/or ACT score, average AP/IB/AICE exam score, and AP/IB/AICE courses offered per graduate.

Along with instructions on how to interpret test data, students and their parents receive a copy of their PSAT, HSPA, SAT I, and SAT II results. In addition, our data is analyzed for, and shared with, parents in special meetings such as Board of Education of the Vocational Schools in the County of Bergen meetings, Open Houses, Class Meetings, and conferences with school counselors. On a state level, N.J. disseminates test data through local newspapers and their Web site (<http://www.state.nj.us/education/data/>).

3. Sharing Lessons Learned:

In his *The New CTE: Secretary Duncan's Remarks on Career and Technical Education* speech, Sec. Duncan said CTE has long been marked by inequality, limited opportunity, a lack of corporate partnerships, weak academic programs, and poor facilities. Given the Secretary's fairly accurate assessment of CTE in general terms, BCTHS has attempted to engage stakeholders worldwide to share the successes of our programs. Highlighted below are some of BCTHS's recent sharing of Best Practices:

- In a recent visit hosted by the Ulsan, South Korea Department of Education, five members of our Auto Engineering & Design Program served as part of a Global Student Ambassador delegation in Ulsan, South Korea.
- Students participated in Young Science Achiever's Program. YSAP's mission is to inspire and encourage groups underrepresented in STEM. Examples of winning research grants were: Nanoparticle biosynthesis using bacterial supernatant, and Smart products for monitoring carbon dioxide emission in our atmosphere.

<http://www.ysap.org/>

- Four faculty members participated in a roundtable discussion with Ms. Jacquelyn Pita, Region II Communications Director of the United States Department of Education, and Ms. Maryann Woods-Murphy, a current 2011 Washington Teaching Ambassador Fellow.
- Maryann Woods-Murphy, a former Teacher of the Year and currently a 2011 Washington Teaching Ambassador Fellow at the Office of the Secretary, U.S. Department of Education visited the nation's only Culinology program. Please click on the link below to read her article in Homeroom, the official blog of the US Department of Education.
<http://www.ed.gov/blog/2012/01/students-in-bergen-county-make-food-magic-for-cancer-patients/>
- On January 31, 2012, 19 members from Gyeonggi Provincial's Office of Education visited BCTHS. Followed by a two hour long q&A session, the visitation included a general school tour of academic and technical offerings.
- Our school's science program, the Progressive Science Initiative (PSI) has become a state model. PSI is being disseminated this year from our school to more than 40 additional schools, and 100 teachers, in the U.S., and beyond. In addition, PSI has presented to the NJ Gender Equity committee at their annual meeting on education due to its very positive effect on involving women in science and engineering.
<http://njctl.org/programs/the-progressive-science-initiative-psi/>
- Exploring technical programs, NJ State School Board Vice Chair Ilan Plawker, NJ State School Board Member Joe Fisiciaro, and members from Burlington County Technical Schools visited. In addition, the groups were provided on master scheduling and curriculum alignment.
- Technology department provided training to Monmouth, Essex, and Union Vocational districts. More specifically, information was given on our admissions process and utilization of admissions data template.

4. Engaging Families and Communities:

BCTHS exists within the municipality of Teterboro, NJ; a community with a population of 67 residents in 25 households in 2011. Receiving students from 48 municipalities within the county could potentially limit the participation at a local town level. However, we have excelled at building a wide outreach with the county. This larger outreach to the community is more reflective of our student body and staff. In developing a sense of community, we have focused on building a strong Parent Partnership Organization (PPO) comprised of individuals who share the same vision and values espoused through our mission. The PPO involves families at the broadest sense. It includes and invites parents, siblings and extended families to join in supporting the activities of our program, be it athletics, performing arts events or school wide fundraising.

Through the use of technology we provide timely updates essential to community involvement. Our Principal has embraced the use of social media to communicate student progress as well as emergency updates. This use of social media has offered students a greater interest in following the postings which include both written and audio visual aspects. In order to engage parents in their child's education, we utilize the school's newly designed website, along with programs such as SchoolMessenger to provide phone and email messages. The English department has organized a student led publication known to our county community as Knight News. Developed from a student's viewpoint, this monthly publication provides intriguing articles and reoccurring viewpoints. The faculty advisor has cultivated reports, researchers and an editorial staff that highlights the organizational and expository skills of our student body. Our stakeholders look forward to this quarterly publication and it always delivers more than expected.

The Digital Media program at our school utilizes over a dozen interns that are paid to work in the production and videography of our school's programs; involving both the building and the communities our students live in. The opportunity to highlight and showcase our events and activities in a digital format are produced in our Digital Media studio, and provided via the schools website through a portal coined Video On Demand. These video also are shown throughout our schools own internal television production studio and displays located throughout our campus. The extensive integration of technology allows our program to engage the residents of our smaller and broader community.

1. Curriculum:

BCTHS's curriculum prepares students to be life-long learners in an evolving global economy. Aligned to the New Jersey Core Curriculum Content Standards (NJCCCS), specialized academics and technical programs prepare our students to succeed in college. To that end, BCTHS offers advanced placement courses in each of its academic areas, and over 100 credits available through articulations with post-secondary institutions.

Utilizing innovative technology in their instruction, teachers prepare their students for success in the 21st century. Equipment such as SMART Boards, student handheld response systems, document cameras, PASCO lab equipment, 3-D printers, 3-D scanners and gas chromatographs are some of the technology used in the classroom. In addition, web based tools such as Wiki, Edmodo, Twitter, School Tube, blogs, podcasts, Google Docs and Live Mocha are all used in the classroom.

Regardless of technical major, barriers do not exist for our students in their academic coursework. All programs encourage students to take responsibility for their own learning, to think for themselves, to develop an integrated understanding of concepts, and to pose and seek to answer important questions. Accordingly, invention becomes the inevitable by-product of a system that capitalizes on team ingenuity, intuition, creativity, and resourcefulness.

In science, all BCTHS students begin with physics in the 9th grade. Upon completion of physics, students can take AP Physics or chemistry, followed by AP Chemistry or biology. The traditional biology, chemistry, physics sequence used by most secondary schools today is a product of thinking from over a century ago. Our teachers believe that the prerequisite for understanding chemistry is physics, and the prerequisite for understanding modern biology is chemistry and physics. A strong understanding of chemistry and physics is essential to molecular biology. This scope and sequence has led to increased participation and passing rates in AP science courses; far exceeding the state and national averages.

Directly aligned with our science scope and sequence, mathematics courses taken by almost all freshmen are algebra and geometry. Students are required to take three math courses, with a large majority choosing to enroll in AP Calculus before they graduate. Aligned to the NJCCCS, mathematics instruction at BCTHS places real world relevance into higher levels of math processing.

Stressing the importance of literacy and writing skills, English instruction is aligned to the NJCCCS. All courses are designed backwards to prepare students for the New Jersey High School Proficiency Assessment (HSPA), AP Literature, AP Language, and the SAT.

Encouraging students to be informed global citizens, all students are required to take World Cultures and United States History I & II that are directly aligned to the NJCCCS. Each of these courses has been designed to prepare students for the rigors of college articulated courses in Sociology (Syracuse), Global Studies (Farleigh Dickenson), as well as AP courses in US Government and History.

Students are required to take two years of a foreign language with offerings in Spanish, French and Mandarin. In order to prepare for college, a large majority of our student population choose to take a third year of foreign language. In addition to learning how to speak and write the language, students also have opportunities to explore the culture of the lands where the language is spoken. New technologies such as a language lab and the web based Live Mocha have helped improve student achievement in foreign language. The number of students enrolled and passing AP Spanish has increased significantly over the past five years. In the future we hope to offer AP courses in French and Mandarin.

As a technical school, students follow a coherent four year scope and sequence of courses; many of which are advanced placement or articulated with a post-secondary institution. BCTHS offers 9 majors: Automotive Engineering & Design, Digital & Media Arts, Strategic Asset Management, Fashion Art, Design, & Merchandising, Commercial Art & Graphic Design, Law & Justice, Computer Science, Culinology®/Food Science and Pre-Engineering. In addition, several of these programs result in industry-standard certifications such as ServSafe, NOCTI (National Occupational Competency Technical Institute), and NA3SA.

In senior year, all students are required to take part in an internship each Wednesday. The internship allows our students to team up with a variety of people within the community, and it allows businesses and corporations to invest in the future of their industry. The essential component of a successful internship is that the student actively participates in an area of interest under the guidance of a mentor.

Committed to education of the whole child, large numbers of BCTHS students enroll in music and art classes such as Chorus, Music Theory, Drawing, Painting, Guitar and AP Fine Art. Students enrolled in these courses have the opportunity to display their work and perform at various school functions throughout the year.

(Course Catalog: <http://bcts.bergen.org/images/stories/THS/PDF/Course%20Catalog%202011-12.pdf>)

2. Reading/English:

English instruction at BCTHS is built around two notions. The first being that students deserve to be prepared with the reading comprehension and writing skills for success at the post-secondary level, regardless of whether they choose to pursue collegiate study. The second being that we need to instill in our students a personal interest in reading and writing, so such activities will no longer be thought of as purely academic. We accomplish this through both our curriculum and instructional strategies.

The English curriculum at Teterboro exposes students to a variety of literary works, including the literary canon. However, much thought has been given to bringing in more contemporary literature, in the hopes that we can rouse greater student interest. For example, during the freshman year the students study works ranging from Romeo and Juliet to John Knowle's, A Separate Peace. All the while students are asked to consider such questions as "How has social networking changed youth and global culture?" and "How does body image shape and/or damage self-esteem?" Such an approach to curriculum is carried out across all four years, and is directly aligned to both AP Language and AP Literature. In fact, the department collaborated with representatives from the Collegeboard when revising its entire curriculum. This helped ensure that our vertical planning would appropriately prepare all students for success at the AP level, while at the same time creating an experience that our students would find motivating. As a result of this work we believe that all of our students should be prepared for the rigors of AP. Therefore, it is our policy to not turn any students away from enrolling in AP level English coursework. Although we are proud of the curriculum we have in place, the curriculum is only as effective as those responsible for its delivery.

Our teachers are masters at improving their students' proficiency in both reading and writing. On a daily basis, faculty aim to engage the learner while promoting ownership of their own reading and writing. For example, when asked to write essays, our students participate in an online community hosted by edmodo. This enables them to share their work with a real audience, receive feedback on their own work from their peers and in turn reflect/revise, as well as review the work of their classmates with a critical lens. In addition, our students can be seen using graphic organizers that they inherited from their English classes in other subject areas. For our struggling readers such strategies have enabled them to grasp some of the finer elements of text, while advanced readers have used them to conceptualize rather sophisticated text, especially in their technical areas.

3. Mathematics:

Our curriculum and instructional methods for mathematics are composed of a series of rigorous core requirements as well as electives and instructional methods that utilized the latest in technology and pedagogy. Upon entering our mathematics program, all students take a placement assessment that determines their point of entry on our math sequence. Students can begin our sequence at the Algebra, Advanced Algebra, or Pre-Calculus level and continue through the sequence below:

- Algebra
- Advanced Algebra & Trigonometry
- Geometry
- Analysis I (First year of Pre-Calculus)
- Analysis II (Second year of Pre-Calculus)
- Calculus (AP and Non-AP)
- AP Statistics or Multivariable Calculus

In addition to the challenging course options articulated above, the way that our district provides math instruction is quite unique in a number of ways. First, our focus on the learning needs of the individual student causes us to provide students with options to challenge themselves regardless of where they place initially. All of our math courses are taught at the honors level. We allow our students to take multiple math courses simultaneously to move deeper down through our sequence. For example, a freshman may take both Advanced Algebra and Trigonometry and Geometry in the same academic year. In addition, we allow students to take core courses with us in the summer in an effort to allow them to get ahead. Second, our use of the latest in instructional technology and methods supports high student achievement. Through the use of Smart Board and Student Responder technology, our teachers and students can obtain constant and current feedback on the level of student understanding from hand-held controllers that collect student answers. These technologies give the student access to detailed formative assessment data every step of the way. In addition, many of our instructors utilize the latest in mobile technologies to create a “Flip” approach to learning where students acquire new concepts for homework accessing teacher-generated content online. Class time is dedicated to allowing students to apply these concepts and synthesize new understandings with the support of the instructor and their peers.

4. Additional Curriculum Area:

Our school’s science program, the Progressive Science Initiative (PSI) has become a state model and is very much in line with the school mission. PSI is being disseminated this year from our school to more than 40 additional schools, and 100 teachers, in the U.S., and beyond.

Our unique curriculum is based on a physics-chemistry-biology sequence. While this falls under the category of Physics First, it is unique in that we have developed a mathematically rigorous 9th grade physics course which requires only algebra. Many Physics First programs use a conceptual 9th grade physics course, which removes much of the mathematical heart of physics, and does not prepare students to go on to AP Physics B. Our algebra-based physics course strongly supports students in mathematics by giving them a practical use for that learning. We think that’s a key reason that our students perform so well on the state mathematics test (second only to the magnet school for mathematics, science and engineering) in our county.

Students in BCTHS take about five times as many AP science exams as the average NJ student, and pass more than four times as many; they take and pass AP Physics B exams (last year 75 of 152 10th graders took the AP Physics B exam/ 50 of them were 3+ scores) at more than twenty times the average rate for the state. Average students, based on their math and verbal SAT scores, are achieving at levels that exceed those of top US students, reaching international standards of performance.

In addition to these six courses in physics, chemistry and biology, a significant numbers of our students take AP Environmental Science, both AP Physics C courses (one in each semester, in 11th grade), Anatomy and Physiology, Organic Chemistry, and Forensic Science.

The NJ Gender Equity committee had us present our program to their annual meeting on education due to it very positive effect on involving women in science and engineering. Equal numbers of males and females take AP Physics B at our school; statewide only about 20% of those taking AP Physics B are women. By exposing both genders equally to all sciences, the gender gap disappeared on its own. This has led to a relatively large percentage of women entering universities, such as MIT, Cornell, Rutgers Engineering, NJIT and Stevens to study engineering.

5. Instructional Methods:

Improvement of instruction is the driving force to help students develop and deepen their understanding of course material. It is expected that all students of BCTHS will succeed. In order to build a framework for success several years ago, BCTHS began utilizing Understanding by Design (Ubd) as a framework to improve student achievement. Unlike a traditional curriculum that starts instructional planning with activities and textbooks, UbD utilizes backward design. In backward design, the teacher starts with classroom outcomes and then plans the curriculum, choosing activities and materials that help determine student ability and foster student learning

Within this framework, our technical and academic instructors utilize varied pedagogical strategies to meet the needs of all learners. These include, project based learning, Socratic dialogue, collaborative activities through social constructivism, formative assessment, concept mapping, cooperative learning, small group instruction, peer tutoring, oral presentations, and classroom simulations. As John Dewey once stated, "If we teach today as we taught yesterday, we rob our children of tomorrow."

It would be an understatement to say that 21st Century Learners are masters of technology. They are innovators, creative designers, critical thinkers, collaborators, and complex problem-solvers. For several years, all of our classrooms have been equipped with Smart Boards and Smart Responders. These tools allow our instructors to pace their lessons based on student learning. Gathering data from responses to prompts, a teacher can check for understanding throughout a lesson. While Smart Boards and Smart Responders are great tools to engage students, they do not go far enough.

By the age of 21, these students will have spent 10,000 hours playing video games, sent 200,000 emails, watched 20,000 hours of television, spent 10,000 hours on a cell phone, but less than 5,000 hours reading. In order to engage today's tech savvy student, our faculty understand the need to utilize Web 2.0 technology. Over the last several years, faculty has incorporated the use of Turnitin.com, Glogster, Twitter, School Tube, Live Mocha, Edmodo, class websites, blogs, wikis, voice threads, podcasts, Garage Band, Google Docs, iMovie, Final Cut Pro, and Ning.

(Ex.: Twitter: @BTprincipal, Glogster: <http://rlcraig.edu.glogster.com/bcths-teterboro-abeosterholocaustremembrance/>)

BCTHS is fortunate to have a faculty that is willing to evolve with technology. More importantly is that they recognize, as Ian Jukes once stated, "We need to prepare students for their future not our past."

6. Professional Development:

PD is shaped each year by a team of teachers and administrators as per the NJ Professional Development Plan requirements. Teacher team members are elected by the local association and work together with administrative representatives at both the building and district level. These committees work each year to assess feedback from teachers and administrators, as well as student assessment results to determine our

priority professional development needs. These priorities are then addressed through a series of channels with an emphasis on the flexibility and breadth needed to meet a variety of scheduling and professional needs.

Teachers in our district have the opportunity to earn professional development hours from a wide variety of channels that provide maximum flexibility while maintaining alignment to our district needs. The opportunities include but are not limited to:

1. Curriculum revisions through Techpaths, an online curriculum mapping tool
2. Collaborative, data-driven activities: Learning analysis, Assessment redesign
3. PD 360 coursework
4. Participation in a Lesson Study
5. Collaborative scoring of a common assessment
6. Completion of work as part of a year-long action research project
7. Attendance in a district training
8. Advisory board meeting with documentation

One of the challenges schools frequently face is to determine what comes next. An example of how BCTHS is able to collaboratively determine that path is through our Futurist Committee. Over the last two years, this committee has identified sustainability, smart machines, social networking and mobile computing, and globalization as playing a central role in shaping the way we enhance our programs moving forward. As such, this year's efforts are to provide professional development opportunities to inform and inspire others to consider these trends in aspects of their instruction. Half-day workshops, off-site experiences, and webinars are vehicles for this initiative. Most recently, the following ideas were discussed as potential offerings in this direction:

- A small group trip to the Rutgers Eco-complex
- A "town hall meeting" on issues of sustainability moderated by an outside expert
- Off-site training at Columbia's Earth Institute
- A presentation by a representative from Apple on their new intelligent, digital assistant SIRI
- A presentation from university faculty on how mobile technologies are changing work environments
- Book clubs on topics related to sustainability and globalization
- Presentations on the impact of globalization on the job markets our students will enter

In summary, it is impossible to determine the next step without input from faculty members.

7. School Leadership:

BCTHS has undergone several administrative changes over the last several years. Despite this turnover, the school has continued to grow and achieve at an extraordinarily high rate. In large part, this has been made possible by the strong foundation laid by previous administrations.

The BCTHS Principal is the primary figure for leadership at the Bergen County Technical High School – Teterboro. Since his return to BCTHS, he has worked diligently to promote the success of all students by facilitating the development, articulation, implementation and stewardship of a vision of learning that is shared and supported by the school community. Although the school has a track record of success, the principal is committed to moving the school forward. “That’s the way we have always done it”, is no longer an acceptable mantra.

In order to rebuild a sense of stability within the community, the Principal recognizes the need to be a visible force in the school. He holds regular monthly meetings with the faculty, visits with members of Student Council and the Parent Partnership Organization. In addition, the Principal has begun to utilize Twitter (@BTprincipal) as a way to disseminate information about the school.

In building upon his vision for the school, the Principal makes frequent informal classroom visits. Throughout the day, the Principal interacts with students and staff to listen to their concerns and points of view about the school. Tuning in to stakeholders is vital to strengthen the school's culture, modify organizational structures, and build collaborative processes.

In addition to informal classroom visits, the Principal makes formal classroom observations of faculty throughout the year. Formal classroom visits consist of: unit plan review; evaluation of teaching practices; and ultimately, review and discussion of the written observation.

Along with the principal, the current administrative team consists of a Vice-Principal, and Dean of Students. In addition, the team solicits and utilizes input from faculty, students, Union Representatives, parents, businesses, and post-secondary institutions with an eye on improvement. On a daily basis, the administrative team meets to discuss both short and long terms goals for the future.

Unlike traditional administrative roles in the school's past, the principal has worked to build a team that is equally responsible for the improvement of instruction. The Dean of Students is no longer exclusively confined to matters of student discipline, and the vice-principal is no longer solely dealing with curriculum. Redesigning an organization from the inside out requires that leaders identify and capitalize on the competence of others and both model and require collaboration.

PART VII - ASSESSMENT RESULTS

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics

Grade: 11

Test: HSPA

Edition/Publication Year: Annual Publisher: Measurement Incorporated

	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Advanced Proficient & Proficient	98	98	99	96	97
Advanced Proficient	47	60	38	32	40
Number of students tested	174	157	135	139	171
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Advanced Proficient & Proficient	100	94		94	95
Advanced Proficient	43	53		28	43
Number of students tested	21	17	8	18	21
2. African American Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested	7	5	5	6	7
3. Hispanic or Latino Students					
Advanced Proficient & Proficient	100	100	100	93	92
Advanced Proficient	34	45	32	23	24
Number of students tested	41	31	19	40	38
4. Special Education Students					
Advanced Proficient & Proficient	100	100	90	80	83
Advanced Proficient	20	30	20	0	33
Number of students tested	10	10	10	10	12
5. English Language Learner Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested				1	
6. ASIAN					
Advanced Proficient & Proficient	100	97		100	100
Advanced Proficient	68	71		59	77
Number of students tested	40	35	4	17	22
NOTES:					

12NJ10

STATE CRITERION-REFERENCED TESTS

Subject: Reading

Grade: 11

Test: HSPA

Edition/Publication Year: Annual Publisher: Measurement Incorporated

	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Advanced Proficient & Proficient	100	99	100	99	98
Advanced Proficient	47	46	20	17	26
Number of students tested	174	157	135	139	171
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Advanced Proficient & Proficient	100	100		100	100
Advanced Proficient	48	30		11	14
Number of students tested	21	17	8	19	21
2. African American Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested	7	5	5	6	7
3. Hispanic or Latino Students					
Advanced Proficient & Proficient	100	100	100	100	95
Advanced Proficient	54	45	11	15	29
Number of students tested	41	31	19	40	38
4. Special Education Students					
Advanced Proficient & Proficient	100	100	100	100	98
Advanced Proficient	50	10	10	20	26
Number of students tested	10	10	10	10	12
5. English Language Learner Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested			1		
6. ASIAN					
Advanced Proficient & Proficient	100	100	100	94	100
Advanced Proficient	52	46	19	12	32
Number of students tested	40	35	21	17	22
NOTES:					

12NJ10

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: Weighted Average

	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Advanced Proficient & Proficient	98	98	99	96	97
Advanced Proficient	47	60	38	32	40
Number of students tested	174	157	135	139	171
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Advanced Proficient & Proficient	100	94		94	95
Advanced Proficient	43	53		28	43
Number of students tested	21	17	8	18	21
2. African American Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested	7	5	5	6	7
3. Hispanic or Latino Students					
Advanced Proficient & Proficient	100	100	100	93	92
Advanced Proficient	34	45	32	23	24
Number of students tested	41	31	19	40	38
4. Special Education Students					
Advanced Proficient & Proficient	100	100	90	80	83
Advanced Proficient	20	30	20	0	33
Number of students tested	10	10	10	10	12
5. English Language Learner Students					
Advanced Proficient & Proficient					
Advanced Proficient					
Number of students tested	0	0	0	1	0
6. ASIAN					
Advanced Proficient & Proficient	100	97		100	100
Advanced Proficient	68	71		59	77
Number of students tested	40	35	4	17	22
NOTES:					

12NJ10

STATE CRITERION-REFERENCED TESTS

Subject: Reading

Grade: Weighted Average

	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Testing Month	Mar	Mar	Mar	Mar	Mar
SCHOOL SCORES					
Advanced Proficient & Proficient	100	99	100	99	98
Advanced Proficient	47	46	20	17	26
Number of students tested	174	157	135	139	171
Percent of total students tested	100	100	100	100	100
Number of students alternatively assessed	0	0	0	0	0
Percent of students alternatively assessed	0	0	0	0	0
SUBGROUP SCORES					
1. Free/Reduced-Price Meals/Socio-economic Disadvantaged Students					
Advanced Proficient & Proficient	100	100		100	100
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3. Hispanic or Latino Students					
Advanced Proficient & Proficient	100	100	100	100	95
Advanced Proficient	54	45	11	15	29
Number of students tested	41	31	19	40	38
4. Special Education Students					
Advanced Proficient & Proficient	100	100	100	100	98
Advanced Proficient	50	10	10	20	26
Number of students tested	10	10	10	10	12
5. English Language Learner Students					
Advanced Proficient & Proficient	0	0	100	0	0
Advanced Proficient	0	0	0	0	0
Number of students tested	0	0	1	0	0
6. ASIAN					
Advanced Proficient & Proficient	100	100	100	94	100
Advanced Proficient	52	46	19	12	32
Number of students tested	40	35	21	17	22
NOTES:					

12NJ10